ELECTROTHERMAL ATOMIC ABSORPTION SPECTROMETRIC **METHOD SM 3113 B – 2004**

ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 3020.

Facility Name:_____ LAB ID_____

Assessor Name:_____Analyst Name:_____Inspection Date_____

Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____

Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
1. Were samples preserved with HNO_3 to pH <2 at least 24 hours prior to analysis?	40CFR163.3 Table 1I				
2. For dissolved metals were grab samples filtered within 15 minutes of collection and before adding preservatives?	40CFR163.3 Table 1I Footer 7				
3. Did the spectrometer have background correction? ☐ Continuum ☐ Zeeman ☐ Smith-Heftje	SM3113B.2.a SM3111A.3.b				
4. Was Ar used as the purge gas (other gases are discussed in Introduction Section)?	SM3113B.2.c				
5. Were graphite tubes with platforms used?	SM3113B.2.c				
6. Was the cooling water supply flowing at 1-4 L / min or a recirculating cooling device?	SM3113B.2.g				
7. Was all glassware rinsed with 1+1 HNO_3 and water?	SM3113B.4.a				
8. If trace aluminum was analyzed, were polypropylene or TFE digestion utensils used?	SM3113B.4.a.				
9. If dissolved metals were analyzed, were the blank and samples filtered through a pre-washed 0.4 to 0.45 µm filter?	SM3113B.4.a.1				
10. When analyzing dissolved As and/or Se, were 3 mL of 30% H_2O_2 and an appropriate volume of nickel nitrate solution added to each 100 mL of sample?	SM3113B.4.a.1				
11. When analyzing total recoverable As and/or Se, were 1 ml HNO_3 and 2 mL 30 H_2O_2 added to 100 mL sample prior to boiling and returning to volume with water?	SM3113B.4.a.3				

Notes/ Comments:

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
12. Was the furnace aligned and optimized in accordance with the manufacturer's instructions?	SM3113B.4.b				
13. Were a blank and at least three calibration standards prepared as needed (10% decrease in response indicates degradation of the standard)?	SM3113B.4.c				
14. Was the correct wavelength selected for the detection of each element?	SM3113B Table 3113:II				
15. Were appropriate matrix modifiers selected for each element analyzed?	SM3113B Table 3113:I				
16. Were standard solutions injected in order of increasing concentration and analyzed in triplicate?	SM3113B.4.c				
17. Were all samples (except those demonstrated to be free of matrix interferences based on recoveries of 85% to 115% for known additions) analyzed using the method of standard additions?	SM3113B.4.d				
18. Were all samples analyzed at least as at least two replicate instrument analyses or until reproducible results were obtained, and the replicate values averaged? (Not to be confused with duplicate sample preparations) NOTE: *Variation should be ≤ 10%.*	SM3113B.4.d				

Notes/ Comments: